
The Effect of Federally Collected Taxes on Revenue Generation in Nigeria

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Abstract

The study examined the effect of federally collected taxes on revenue generation in Nigeria from 1992 to 2016 examining the specific objectives; if there is any significant relationship between the federally collected Taxes and revenue generation in Nigeria while Petroleum Profit tax, Companies Income Tax, Value Added Tax and Customs & Excise Duties proxies federally collected taxes. Secondary data were sourced from Federal Inland Revenue Services (FIRS). The adopted research design was Ex-post facto using ordinary least square regression (OLS) by way of preliminary test, augmented dickey fuller (unit root) test was used to ascertain the stationary state of the time series variables. The findings showed that all the examined variables have positive effect except customs & excise duties that have negative effect on revenue generation in Nigeria. In recommendation, government should review the customs & excise duties act

Keywords: Federally Collected Taxes, Revenue, Time series analysis, Nigeria

1.0 Introduction

Governments require revenue to augment its spending and needs to maintain an adequate level of public investment & social services. The three tiers of government require more revenue to provide basic amenities to her citizens. There are different sources of revenue to the government in which taxes are one of the major sources of raising revenue in both developing and developed countries (Aizenman and Jinjark, 2008; Saeed and Sheikh, 2011). Nigeria is one of the developing countries that have a very low tax collection which is attributable to complex tax laws, inefficient network of tax exemptions and incentives, weak tax administration, low tax education and narrow tax base (Aregbeyen and Fasanya, 2013).

The diversification of revenue base into a monopolized crude oil based has been the major challenge of revenue generation in Nigeria. This situation is being strained by the oil revenue which accounts for about 80 percent of government revenue. A major challenge facing Nigeria's Economy is the diversification of its revenue base. This diversification has become necessary with the realization that dependency on crude oil earnings cannot sustain public expenditure. The Economy faces the danger of being grounded if proactive efforts are not made towards sustaining the diversification of the revenue base.

2.0 Literature Review

2.1 Types of Taxes

Tax is assessed in accordance with the reasonable rule of apportionment on persons or property within the tax administration and it is purely statutory. The 1999 Nigerian Constitution puts the collection of taxes in the 2nd schedule item 7-10 under the concurrent list thereby giving the 3 tiers of government i.e. the federal government, state government and local government have power to make provisions for the collection of tax. The various types of tax payable in Nigeria are:

2.1.1 Value Added Tax: Which was brought into existence by Decree 2 of 1993 to replace the sales tax? The value added tax is five percent and it is a consumption tax that has been embraced by many countries and very easy to administer and difficult to evade as it has been added from sources and paid to the federal board of internal revenue periodically by the supplies of goods and services. In case of imported goods, this is paid directly to the federal board of internal revenue at the same time as import duties. It is governed by the value added tax act 2004.

2.1.2 Capital Gains Tax: This is tax charged on the proceeds of property sold off by a tax payer. The tax is ten percent of chargeable gain propriety right, sale or lease of property. The aim of the tax to boost revenue by government by deducting certain specified amount from gains accruing to any person on disposal of qualifying capital expenditure (assets). What amounts to disposal includes sales, lease, transfer, assignment and compulsory acquisition. This tax is regulated by the capital Gains Tax Act 2004.

2.1.3 Education Tax: This evolved from the idea of private sector participation in the finding of education in Nigeria. The tax is two percent of the assessable profit of incorporated companies in Nigeria.

2.1.4 Personal Income Tax: The tax is imposed on the incomes of individuals in employment, sole traders, partners in partnership business, trust, estate & settlement. It has two divisions; Direct assessment (self-assessment) and Pay As You Earn (*PAYE*) basis that is the tax payable depends on how much is earned by the tax payer. The tax is regulated by the Personal Income Tax Act 2004.

2.1.5 Company Income Tax: This is thirty percent of the chargeable profit of a company accruing in, derived from, brought into or received in Nigeria. The tax is regulated by the Companies Income tax Act 2004.

2.2 Concept of Revenue

Revenue is very important concept in economic analysis. It is directly influenced by sales level, i.e., as sales increases, revenue also increases. However, looking at the term revenue from the point view of government, it is the income of the government through all sources and is called public income or public revenue. The revenues are; taxation, fees, fines, grants, borrowings, gifts & donations, sales of government assets, sales of crude oil and other minerals.

Dalton (2016), defined the term "Public Income" from two senses *wide and narrow*. In its wider sense it includes all the incomes or receipts which a public authority may secure during any period of time. In a modern welfare state, public revenue is of two types, *Tax Revenue and Non-Tax Revenue*.

2.2.1 Fines and Penalties: Fines and penalties are levied and collected from offenders of laws as punishment.

2.2.2 Fees are charged by the government or public authorities for rendering a service to the beneficiaries. Seligman (1895), "A fee is a payment to defray the cost of each recurring service undertaken by the government, primarily in the public interest, but conferring a measurable advantage to the payer." E.g. Court fees, passport fees, license fees, driving license fee, import license fee, e.t.c.

2.2.3 Profit of State Enterprise

Profits of state undertakings also are an important source of revenue these days, owing to the expansion of the public sector. For instance, the central government runs railways. Surplus from railway earnings can be normally contributed to the revenue budget of the central budget.

Likewise, profits from the state transport corporation and other public undertakings can be important sources of revenue for the budgets of state governments.

2.2.4 Gift and Grants

These are purely voluntary contributions. Gifts have some significance, especially during war time or an emergency. In modern times, grants from one government to another have a greater importance. Local governments receive grants from state governments and state governments from the central government. The central government gives grants- in-aid to state governments in order to enable them to carry out their functions. When grants are made by one country's government to another country's government it is called foreign aid.

2.3.0 Theoretical Review

2.3.1 Supply-siders Theory: Dickson (2014): adopted the theory of supply-siders, the theoretical foundation of tax reform is gotten from the supply-siders. These are sets of Economist who had their hay days between 1970 and early 1980s. The supply-siders believed in the use of economic incentives to encourage production. They positioned that higher marginal tax rate will not only create disincentive to work, invest and save but encourages tax avoidance and evasion, that reduces public generated revenue. The leader of the group Arthur (1979), using what is today known as the Laffer curve showed that there is an optimum tax rate that both encourages savings, investment and labour supply, and at the same time motivate tax payment obligation. Thus, tax rate in excess of the optimum rate will be harmful to economic activities.

2.3.2 Optimal Taxation Theory: Asaolu (2015), Adopted the theory of optimal taxation theory. Another dimension to the theory of tax reform is the optimal tax reform theory. Under this theory, it is required that the best way to raise revenue is through taxing goods or factors with inelastic demand or supply, and that taxation relating to distribution and externalities or market failures should concentrate on identifying the source or origin of the problem. Thus for distribution, one should look for the sources of inequality (for example, land endowments or earned incomes) and taxation should be concentrated there. Regarding externalities, an attempt should be made to tax or subsidize directly the good or activity that produces the externality (Stern, 1988). Employing the optimal tax reform theory, Newbery and Stern (1987) applied a normative framework to analyze the tax reform process. The optimal taxation approach according to them emphasizes the need to analyze the impact of tax reform and evaluate both its administrative costs and its effects on social welfare. The major problem of this approach is that it required substantial data which are difficult to source in developing countries. In addition, optimal taxation assumes the existence of perfect tax administration, which does not exist in Nigeria and several developing countries.

2.3.3 Economic based Theory: Ezugwu and Agbaji (2014), Applied Economic based theory and Psychological theory. Various tax policies have been put in place by the government to increase the internally generated revenue for the State. Given the chance, a lot of taxpayers may not pay taxes unless there is a motivation or coercion to do so. Tax policy theories can be broadly classified into two. These are: Economic based theory; and Psychological based theory. Therefore this is also known as deterrent theory and they place emphasis on incentives. The

theory suggests that taxpayers are amoral utility maximisers- they are influenced by economic motives such as profit maximization and probability of detection.

2.4 Theoretical Framework

Supply-siders Theory was adopted for this study on the postulations that; the supply-siders believed in the use of economic incentives to encourage taxpayers. Arthur *et al.* (1979), using what is today known as the Laffer curve showed that there is an optimum tax rate that both encourages savings, investment and labour supply, and at the same time motivate tax payment obligation.

3.0 Methodology

Secondary data were sourced from Federal Inland Revenue Services, Bureau of statistics and other Revenue collection Authority in Nigeria using ex-post facto research design. The study considered the population spanning over 1992 – 2016 while the stratified sampling techniques under probability sampling technique was chosen because the population was divided into two or more groups called strata, after which a random selection is made with each stratum include. The stratum include: Direct taxes such as (CIT & PPT) and Indirect taxes such as (VAT & CED).

4.0 Result

4.1 Ordinary Least Square (OLS)

This was used to estimate the relationship existing between the regressand (Revenue Generation in Nigeria) and the regressors (PPT, CIT, VAT and CED), that is to test the extent to which all the variables impact on revenue generation in Nigeria.

Table 1: Least Square Regression

Dependent Variable: RGN

Method: Least Squares

Sample (adjusted): 1992 - 2016

Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PPT	2.284765	0.404147	5.653303	0.0000
CIT	10.26280	1.837271	5.585892	0.0000
VAT	4.552648	1.234204	3.688731	0.0017
CED	-2.611397	1.546331	-1.688770	0.1085
C	646647.0	360973.6	1.791397	0.0901
R-squared	0.881272	Mean dependent var		3854342.
Adjusted R-squared	0.854888	S.D. dependent var		2809012.
S.E. of regression	1070053.	Akaike info criterion		30.79397

Sum squared resid	2.06E+13	Schwarz criterion	31.04082
Log likelihood	-349.1307	Hannan-Quinn criter.	30.85606
F-statistic	33.40177	Durbin-Watson stat	1.403214
Prob(F-statistic)	0.000000		

Dependent variable: RGN ***significance at 5%**
Independent variables: PPT, CIT, VAT & CED

Source: Extracted from Researcher's Regression Analysis (Output), 2017

Estimated Model: $RGN_t = \beta_0 + \beta_1 PPT_t + \beta_2 CIT_t + \beta_3 VAT_t + \beta_4 CED_t + U_t$

RGN represents Revenue Generation in Nigeria

β_0 Means constant or intercept of revenue generated when other variables are not applied denoted by C

β_1 Means co – efficient of Petroleum Profit Tax

β_2 Means co – efficient of Companies Income Tax

β_3 Means co – efficient of Value Added Tax

β_4 Means co – efficient of Custom & Excise Duties

U_{1t} It represents random variables that are not explained within the estimated model to capture the effect of other determinants of Tax Reform.

t Time period under study (1992-2016).

Estimated Statistical Output: $RGN = 646647.0 + 2.28PPT + 10.26CIT + 4.55VAT - 2.61CED + U_{1t}$

The result obtained from the model indicates that the overall coefficient of determination (R^2) shows that a high proportion (88.12) percent of the total generated revenue in Nigeria is explained by the various federally collected taxes in the equation i.e. (PPT, CIT, VAT & CED). The adjusted (R^2) of 0.8548 showed that having purged the impact of the explanatory variables, RGN is explained in the equation by 85.48 percent i.e. as a result of changes in revenue.. The Durbin-Watson (D.W) statistics of 1.40 was not substantially further away from the traditional benchmark of 2.0. The study concludes that there is no sign of auto-correlation or serial correlation in the model specification, hence, the assumption of linearity is not violated. Therefore, there exists a positive relationship between federally collected taxes and revenue generation in Nigeria.

From the above model, both petroleum profit tax (PPT), company income tax (CIT) and Value Added Tax (VAT) have positive relationship with revenue generated in Nigeria. That is, one percent increase in PPT revenue, CIT revenue and VAT will lead to increase in the total revenue generated in Nigeria by 2.28 percent, 10.26 percent and 4.55 percent respectively. The P-values of those variables also indicates that they are significant at influencing total revenue generated in Nigeria at less than 1 percent (which is lower to the traditional benchmark of 5% and 10% respectively).

However, Custom & Excise duties (CED) have a negative impact. This implies that increase in the coefficient of custom & excise duties revenue by 1 percent will lead to a decrease in the total revenue generation by 2.61 percent. The P-value of the variable also indicates the coefficient is not significant at 10 percent. Based on the probability value above it is evident that the other three variables are significantly contributing to sources of revenue generation in Nigeria among other vibrant taxes in Nigeria.

4.2 Unit Root Tests

In order to ascertain the stationary state of the time series variables the unit root test was employed. This is imperative since the study is ignorant of the data generating process. The augmented Dickey – Fuller was employed and the results are shown in Table 4.4.1

Table 2: Augmented Dickey – Fuller

AT LEVELS			AT FIRST DIFERENCE		
Variables	ADF	Remark	ADF	Remark	Decision
RGN	-1.439	Non-Stationary	-5.928	Stationary	
<i>CV@1%</i>	-3.737		-3.752		
<i>CV@5%</i>	-2.991		-2.998		
<i>CV@10%</i>	-2.635		-2.638		
PPT	-1.617	Non-Stationary	-4.134	Stationary	1(1)
<i>CV@1%</i>	-3.737		-3.832		
<i>CV@5%</i>	-2.991		-3.029		
<i>CV@10%</i>	-2.635		-2.655		
CIT	1.333	Non-Stationary	-5.081	Stationary	1(1)
<i>CV@1%</i>	-3.737		-3.753		
<i>CV@5%</i>	-2.991		-2.998		
<i>CV@10%</i>	-2.635		-2.638		
VAT	3.641	Non-Stationary	3.485	Stationary	1(1)
<i>CV@1%</i>	-3.857		-3.887		
<i>CV@5%</i>	-3.040		-3.052		
<i>CV@10%</i>	-2.660		-2.667		
CED	-1.431	Non-Stationary	-5.181	Stationary	1(1)
<i>CV@1%</i>	-3.738		-3.753		
<i>CV@5%</i>	-2.992		-2.998		
<i>CV@10%</i>	-2.636		-2.639		

Source: Researcher's study (2017)

In table 4.4.1, the test result indicated that the time series variables for Revenue Generation in Nigeria, Petroleum Profit Tax, Company Income Tax, Value Added Tax, and Custom & Excise Duties were not found to be stationary at levels for 1%, 5% and 10% significant. However, after first differencing, Revenue Generation in Nigeria, Petroleum Profit Tax, Company Income Tax, Value Added Tax, and Custom & Excise Duties were found to be stationary at 5% and 10% level of significance. We can therefore conclude that all the variables are stationary at first difference; hence, we reject the null hypothesis “*non-stationary*” at first difference. These indicate that those incorporated series in the regression model have no unit-root and that the series in their first difference are mean reverting and converge towards their long-run equilibrium.

5.0 Summary and Conclusion

5.1 Summary: The study was conducted to examine the effect of federally collected taxes on Revenue generation in Nigeria. In order to achieve this, various income taxes were used as proxies in order to ascertain whether federally collected taxes actually affect revenue generation in Nigeria. The two groups of income taxes (Direct and Indirect tax) two types of taxes from

each were chosen such as petroleum profit tax and company income tax as direct taxes and value added tax and custom & excise duties as indirect taxes.

5.2 Conclusions: This study showed that federally collected taxes had experienced unprecedented progress since its initiation in 1999. Through, more revenue were generated through taxation. This study concluded that the federally collected taxes had a positive effect on revenue generation in Nigeria.

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